

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JEFFERY K. JEANSONNE, TIM L. ZHANG, JAMES L.  
MONDSHINE, and JEFFREY C. PARKER

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Appeal 2007-1468  
Application 09/912,784  
Technology Center 2100

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Decided: June 28, 2007

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Before LEE E. BARRETT, LANCE LEONARD BARRY, and ROBERT E.  
NAPPI, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 6(b) of the Final  
Rejection of claims 17 through 34 and 36 through 55.

We affirm-in-part.

## INVENTION

The invention is directed to a system and method that allows a wireless module of a computer to search for wireless networks without the computer being turned on. See paragraph 0009 of Appellants' Specification. Claims 17 and 40 are representative of the invention and reproduced below:

17. A computer system comprising:

a main system processor;

a system main memory coupled to the processor;

a radio module that scans for available wireless access points which support two-way data communications;

a power supply coupled to the radio module and the main system processor;

an electrical switch mounted on an external surface of the computer system; and

a seek logic coupled to the electrical switch and the power supply;

wherein the seek logic commands the power supply to power the radio module responsive to the actuation of the electrical switch; and

wherein the radio module scans for available wireless access points, and indicates the availability of a wireless access point, both while the computer system is powered-off.

40. (Previously Presented) A structure of a handheld device comprising:

a seek request button mounted on an outer surface of the device;

a wireless communication module coupled to the seek request button, and wherein the wireless communication module seeks for availability of a wireless connection to the Internet for a computer, the seeking responsive to assertion of the seek request button;

a system battery coupled to the wireless communication module, and wherein the system battery supplies power to the wireless communication module during seeks for wireless access points; and

a notification device coupled to the wireless communication module, wherein the notification device indicates the availability of a wireless access point.

## REFERENCES

The references relied upon by the Examiner are:

|          |                    |                       |
|----------|--------------------|-----------------------|
| Lester   | US 4,194,833       | Mar. 25, 1980         |
| Asami    | US 2002/0054158 A1 | May 9, 2002           |
|          |                    | (filed Aug. 29, 2001) |
| Ishigaki | US 6,448,927 B1    | Sep. 10, 2002         |
|          |                    | (filed Aug 23, 2000)  |
| Onsen    | US 6,473,811 B1    | Oct. 29, 2002         |
|          |                    | (filed Mar. 11, 1999) |

Sporty's JD-200 Transceiver Operator's Manual (1999).

## REJECTIONS

Claims 17, 21, 24 through 30, 32, 34, 36 through 38, 40, 44 through 50, and 53 through 55 stand rejected under 35 U.S.C. § 103 (a) as being

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unpatentable over Applicants' Admitted Related Art (AARA) in view of Ishigaki. The Examiner's rejection is on pages 4 through 12 of the Answer.

Claims 18 through 20, 31, 33, 39, 41 through 43, 51, and 52 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over AARA in view of Ishigaki and Official Notice of what was well known in the art. The Examiner's rejection is on pages 13 through 15 of the Answer. On page 21 of the Answer, the Examiner identifies that Onsen, Asami and Lester are presented as evidence of the facts Officially Noticed.

Claims 22 and 23 stand rejected under 35 U.S.C. § 103 (a) as unpatentable over AARA in view of Ishigaki and Sporty. The Examiner's rejection is on pages 15 and 16 of the Answer.

Throughout the opinion, we make reference to the Brief, Reply Brief (dated September 25, 2006 and January 19, 2007), and the Answer (dated December 5, 2006) for the respective details thereof.

**I) Rejection under 35 U.S.C. § 103 (a) as unpatentable over AARA in view of Ishigaki.**

## ISSUES

Appellants contend that the Examiner's rejection under 35 U.S.C. § 103(a) based upon the combination of AARA and Ishigaki is in error. Appellants assert that AARA and Ishigaki are not properly combinable, as AARA is concerned with searching while the computer system is powered on, and to incorporate Ishigaki into AARA would defeat the purpose of Ishigaki or render AARA unsatisfactory for its intended use. Brief, pp. 15

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and 16. Further, Appellants argue that even if AARA and Ishigaki were combined the combination does not teach or suggest that the radio module scans while the computer system is powered off.

The Examiner asserts that the rejection is proper. The Examiner asserts that contrary to Appellants' arguments, AARA does not require the computer be continuously connected to the network. Further, the Examiner applies a dictionary definition of the term "off" and equates it with a computer's sleep or hibernate mode. Answer 18.

Thus, the Appellants' contentions present us with two issues: first whether the combination of AARA and Ishigaki would defeat their respective purposes; and second, whether the combination of AARA and Ishigaki teaches or suggests that the radio module scans while the computer system is powered off as claimed.

While we note that Appellants' contentions directed to the second issue groups together claims 17, 21, 24, 26 through 30, 32, 36, 37, 40, 44, 45, 47, 49, 50, and 53 through 55 (Brief, p. 16), we do not so group the claims. The limitation argued by Appellants, that the radio module scans while the computer is powered off, is not present in independent claims 32, 36, and 40. Thus, we will consider the claims in two groups: group 1, consisting of claims 17, 21, 24, 26 through 30, 45, 47, 49, 50, and 53 through 55 and we select independent claim 17 as representative of this group, both issues apply to this group; and group 2, consisting of claims 32, 36, 37, 40, and 44 and we select independent claim 40 as representative of this group, only the first issue applies to this group. Additionally, we note that Appellants have presented separate arguments directed to the group of

dependent claims 25, 34, 38, 46, and 48 which we address in the analysis section *infra*.

## FINDINGS OF FACT

AARA admits that at the time of the invention, notebook computers had been sold which contained wireless local area network devices. These wireless network devices include a two-way radio unit coupled to the computer. Appellants' Specification paragraph 0005. Software on the computer allows the wireless device to scan for and indicate available access points (transmitters from which a signal is received). Appellants' Specification paragraph 0006. AARA describes the radio unit as being active and scanning only when the computer is powered on, booted up, and fully operational. Appellants' Specification paragraph 0007. Appellants' Specification does not discuss the purpose of the computer as being to access a network, but rather discusses it as a functionality of a notebook computer.

We find that inherent in a computer is a processor that executes instructions and memory.

Ishigaki teaches a power management scheme for portable devices which contain Global Positioning System (GPS) units. The scheme keeps the GPS receiver in a power- off state except when position measuring is needed. Abstract and Column 2, ll. 2-11. Thus, Ishigaki seeks to reduce the current demanded by the portable device. Column 1, ll. 64-67.

Ishigaki teaches several embodiments, each with a different trigger to turn on the GPS receiver. In the first, second, and fifth embodiment the

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GPS receiver is turned on when a position measuring button is pressed (second embodiment GPS turned on when a sequence of buttons are pushed). See figures 1 and 5 and discussion in Column 4, ll. 1-22 and ll. 31-35. In these embodiments, there is a control section, item 2, which controls power to the GPS receiver, this power source is separate from the phone, item 3 but is responsive to the position button on the phone. Throughout the operation of the GPS receiver, the phone is in the standby state. In other embodiments, there are other events which trigger powering up the GPS receiver such as: dialing or receiving a call from a specific phone number, third and fourth embodiment, Column 5, ll. 14-17 and ll. 38-42; based upon timer which may be adjusted based upon distance or speed between measurements, sixth, eight and ninth embodiment, Column 6, ll. 23-39 Column 7, ll. 60-63, and Column 8, ll. 34-37. Several embodiments have separate modules to receive the GPS signals and decode the GPS signals, see tenth through twelfth embodiment, Column 9, ll. 11-18, and Column 10, ll. 1-10 and ll. 42-48. In these embodiments, the phone is described as being in standby mode. Column 4, ll. 52-54. We find no description of the GPS monitoring circuit being operated when the phone is off.

## LEGAL PRINCIPLES

As was recently described in *In re Kahn*, 441 F.3d 977, 78 USPQ2d 1329 (Fed. Cir. 2006):

[T]he “motivation-suggestion-teaching” test asks not merely what the references disclose, but whether a person of ordinary skill in the art, possessed with the understandings and

knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims. From this it may be determined whether the overall disclosures, teachings, and suggestions of the prior art, and the level of skill in the art – *i.e.*, the understandings and knowledge of persons having ordinary skill in the art at the time of the invention-support the legal conclusion of obviousness. (internal citations omitted).

*Id.* at 988, 78 USPQ2d at 1337. To establish a *prima facie* case of obviousness, the references being combined do not need to explicitly suggest combining their teachings. *See id.* at 987-88, 78 USPQ2d at 1336-37 (“the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references”). “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” *Id.* at 987-88, 78 USPQ2d at 1336 (quoting *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000)).

In analyzing the scope of the claim, office personnel must rely on Appellants’ disclosure to properly determine the meaning of the terms used in the claims. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980, 34 USPQ2d 1321, 1330 (Fed. Cir. 1995). “[I]nterpreting what is *meant* by a word *in* a claim ‘is not to be confused with adding an extraneous limitation appearing in the specification, which is improper’” (emphasis original). *In re Cruciferous Sprout Litigation*, 301 F.3d 1343, 1348, 64 USPQ2d 1202, 1205, (Fed. Cir. 2002) (citing *Intervet America Inc v. Kee-Vet Laboratories Inc.*, 12 USPQ2d 1474, 1476 (Fed. Cir. 1989)

## ANALYSIS

### A) First issue.

We will first address the issue of whether the references are properly combinable. As discussed in our Findings of Fact, AARA teaches use of a radio transmitter in a computer device which seeks wireless connection points. Also, as discussed in our Findings of Fact, Ishigaki teaches that to save power in a portable device, the GPS circuit (a radio receiver) is to be turned off when not needed. We consider that it would be readily apparent to one skilled in the art that the Ishigaki's power management scheme of turning off power to a radio receiver except when activated by a user would also net power savings in a portable computer with a wireless network connection (i.e. providing a switch to turn on and off the wireless network receiver). Thus, we find that combining AARA and Ishigaki would not defeat the purpose of Ishigaki or render AARA unsatisfactory for its intended use. Whether or not the combination teaches or suggests powering the wireless network device while the processor is off relates to the second issue. Thus, we find for the Examiner on the first issue.

Independent claim 40 reproduced above is directed to a handheld device and recites limitations directed to a powering a wireless communication module during seeks, initiated by a seek button. As discussed above in the statement of the Issues, independent claim 40 recites no limitation directed to the power state of the handheld device. Thus, the scope of claim 40 includes powering wireless communication module while the handheld device is powered on. As discussed above, we hold that one

skilled in the art would apply the power management scheme, of turning off power to a radio receiver except when activated by a user, to a portable computer with a wireless network connection. Accordingly, we affirm the Examiner's rejection of independent claim 40 and the claims grouped therewith, claims 32, 36, 37, and 44.

B) Second issue.

As discussed above in the statement of issues, the second issue is whether the combination of AARA and Ishigaki teaches or suggests that the radio module scans while the computer system is powered off as claimed.

Independent claim 17, recites "wherein the radio module scans for available wireless access points, and indicates the availability of a wireless access point, both while the computer system is powered-off."<sup>1</sup> Appellants' Specification on pages 5-6 states:

The term "powered-off" means that the computer system is off and is not operational as far as a computer system user is concerned. It should be noted that in most notebook computers, even when the notebook computer is powered-off, there are certain functions and circuits within the computer that are still coupled to active power, e.g., a keyboard controller looking for assertion of a power-on request. It is intended throughout this specification that the term "powered-off" refers to the condition

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<sup>1</sup> We note that the claim term "both" as used in the claim contains an ambiguity, it is unclear if the claim recites the radio module is both scanning and indicating while the unit is powered and off, or the claim recites the radio module is scanning and indicating while the computer system is both powered and off. This ambiguity does not impact our decision regarding the prior art rejection as in either of these interpretations the claim would recite scanning and indicating while the computer system is off. However, Appellants and the Examiner should take appropriate action to clarify the claims.

that, as far as the computer system user is concerned, the device is not operational.

Thus, the scope of independent claim 17 includes the radio module scanning for access ports while the computer is off (not operational as far as the user is concerned). Independent claims 26, 45, and 49 recite similar limitations. Independent claim 54 recites the limitation “before an operating system of the computer system is booted” which is of different scope.

We appreciate that a hibernate or sleep mode of a computer may meet this definition of off as not operational as far as the user is concerned, but they do not meet the limitation of before an operating system is booted. However, we find that the standby mode of a phone such as taught by Ishigaki does not meet the claim limitation of being off (or before an operating system is booted). As discussed above, Ishigaki teaches that the radio receiver of the GPS unit may be turned off while the phone is in standby mode. The standby mode of a phone is a mode where the phone is on and ready to receive or place a call, as such it would appear to the user to be operational, i.e. standby is an idle state and not a non-operational state. Thus, we find that the combination of AARA and Ishigaki does not teach all of the limitations of independent claims 17, 26, 45, 49, and 54. Accordingly, we reverse the Examiner’s rejection of claims 17, 21, 24, 26 through 30, 45, 47, 49, 50, and 53 through 55 under 35 U.S.C. § 103(a) based upon the combination of AARA and Ishigaki.

Appellants present separate arguments directed to claims 25, 34, 38, 46, and 48. As claims 25, 46, and 48 are dependent upon claims 17 and 45

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respectively, we reverse the rejection of claims 25, 46, and 48 for the reasons discussed with respect to claims 17 and 45.

However, claims 34 and 38 are dependent upon claims 32 and 36 respectively, the rejection of which we affirm. Thus, we will consider the rejection of claims 34 and 38 together as a group. As discussed above, independent claim 32 does not recite a limitation limiting the scope of the claim to performing the seek when the computer is powered off. However, claim 34 further limits claim 32 by reciting wherein the seek logic refrains from enabling the wireless communication means module from seeking wireless access clients if the computer is powered-on” which limits the scope of the claim to refraining from scanning unless the computer is in the powered-off condition (opposite of powered-on). Dependent claim 38 recites similar limitations. As discussed above with respect to claim 40, we find that the combination teaches turning off power to a radio receiver except when activated by a user. However, as also discussed above, with respect to claim 17, we do not find that the combination teaches a radio module scans for access ports while the computer is off (not operational as far as the user is concerned). Thus, we do not find that the combination of AARA and Ishigaki teaches all of the limitations of claims 34 and 38. For the above reasons, we reverse the Examiner’s rejection of claims 25, 34, 38, 46, and 48 under 35 U.S.C. § 103(a) based upon the combination of AARA and Ishigaki.

**II) Rejection under 35 U.S.C. § 103 (a) as unpatentable over Applicant Admitted Related Art (AARA) in view of Ishigaki and Official Notice of what is well known in the art.**

**ISSUES**

Appellants argue, on page 20 of the Brief, that the rejection of claims 18 through 20, 31, 33, 39, 41 through 43, and 51 through 52 is in error. Appellants state that the rejection is erroneous for the reasons discussed with respect to the rejection of AARA and Ishigaki discussed above and because the Examiner has not provided evidence to support the noticed facts.

The Examiner asserts that the rejection is proper. On page 21 of the Answer cites Onsen, Asami and Lester as evidentiary support for the noticed facts.

Thus, Appellants' contentions present us with two issues, whether the arguments directed to the rejection of AARA and Ishigaki is in error and whether the Examiner has provided evidence to support the noticed facts.

**ANALYSIS**

Initially, we note that claims 18 through 20, 31, and 51 through 52 depend on one of claims 17, 26, 45, 49 or 54. As discussed above, we reverse the Examiner's rejection of claims 17, 26, 45, 49 or 54. Thus, for the same reasons, we reverse the Examiner's rejection of claims 18 through 20, 30, 31, and 51 through 52.

Claims 33, 39, and 41 through 43 depend upon claims 32, 36, and 40 respectively. As discussed above, we affirm the Examiner's rejection of

these claims. Claim 33 recites “the notification device further comprises a light emitting diode.” Claims 39, 41, and 42 recite similar limitations directed to light emitting diodes and indication. Claim 43 recites a text display. The Examiner took Official Notice that use of a light emitting diode and text displays to provide notification was known. On page 21 of the Answer, the Examiner cited Asami as evidentiary support that using light emitting diodes were known and Lester as support to show that text displays were known. We note that Appellants’ Reply Brief does not contest the factual evidence supplied by the Examiner to support the noticed facts. As such, we accept the noticed facts as un-contested. For the forgoing reasons, we affirm the Examiner’s rejection of claims 33, 39, and 41 through 43.

**III) Rejection under 35 U.S.C. § 103 (a) as unpatentable over  
Applicant Admitted Related Art (AARA) in view of Ishigaki  
and Sporty’s.**

**ISSUES**

Appellants argue on pages 20 and 21 of the Brief that the rejection of claims 22 and 23 is in error. Appellants’ arguments directed to the combination of AARA and Ishigaki discussed above also apply to this rejection. Further, the Appellants assert that Sporty does not teach the claimed feature which requires the user to hold the electrical switch during the scan.

The Examiner asserts that the rejection is proper. The Examiner finds that Sporty teaches that a seek is initiated when a button is pressed.

Appellants' contentions present us with two issues, first as is the rejection of claim 22 in error for the reasons discussed above concerning the rejection based upon AARA and Ishigaki and second whether Sporty teaches the claimed feature of the user holding the switch during the seek period.

## ANALYSIS

Independent claim 22 recites "wherein the radio module scans for wireless access points, and indicates the availability of a wireless access point, both while the computer system is powered-off." This limitation is similar to the limitation discussed above with respect to claim 17. As discussed above with respect to claim 17, we find that the combination of AARA and Ishigaki does not teach this feature. The Examiner has not asserted nor do we find that Sporty teaches this limitation. Thus, we do not reach the second issue as we reverse the Examiner's rejection of claims 22 and 23 for the reasons discussed *supra* with respect to claim 17.

## CONCLUSION

We reverse the Examiner's rejections of claims 17 through 31, 34, 38, and 45 through 55 under 35 U.S.C. § 103(a). However, we affirm the Examiner's rejection of claims 32, 33, 36, 37, 39, and 40 through 44. Further, we note that should there be further prosecution of this application Appellants and the Examiner should take steps to clarify the ambiguities noted in footnote 1.

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The decision of the Examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2006).

**AFFIRMED-IN-PART**

tdl/gw

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